ABSTRACT

The present invention relates to recovery of industrial grade potassium chloride and low sodium edible salt from bittern as part of an integrated process. The process comprises, mixing low sulphate concentrated feed bittern (a by-product of salt industry) of density 31.5 to 32.5 ^{o}Be (sp.gr.1.277-1.289) with high density end bittern of density 36.5 to 37.5^{o}Be' (sp.gr.1.336-1.35), thereby producing low sodium carnallite, from which industrial grade potassium chloride is produced. The resultant bittern is evaporated in forced evaporation system, thereby producing crude carnallite, from which low sodium salt that would be beneficial to persons suffering from hypertension is produced. When sulphate-rich bittern is used, such bittern is desulphated with $CaCl_2$ that is generated from carnallite decomposed liquor through reaction with lime, and wherein low B_2O_3-containing $Mg(OH)_2$ is a by-product. The entire content of potassium in feed bittern is recovered in the process of the invention.